

CLAIMS

1. A cover assembly for regulating or adjusting the temperature of materials within a fluid conduit comprising:
 - 5 at least one elongate fluid transfer profile having a hollow interior for the passage of a thermal transfer fluid, said profile including a concave exterior surface extending along a length thereof;
a cover closable about said fluid transfer profile and adapted to position and maintain said concave exterior surface in thermal contact with a fluid
10 conduit.
2. The cover assembly of claim 1 comprising a plurality of said fluid transfer profiles, and wherein said cover is adapted to position said plurality of profiles in thermal contact with a fluid conduit.
15
3. The cover assembly of claim 2 wherein said cover comprises a flexible fabric having means for positioning each of said plurality of profiles at substantially radially symmetric positions about said fluid conduit.
- 20 4. The cover assembly of claim 3 comprising a plurality of straps attached to an inside of said cover for positioning said profiles.
5. The cover assembly of claim 3 comprising 4 profiles.
- 25 6. The cover assembly of claim 3 comprising 6 profiles.
7. The cover assembly of claim 1 comprising a plurality of profiles formed from metal.
- 30 8. The cover assembly of claim 7 wherein said at least one fluid transfer profile is formed from a metal selected from the group consisting of copper and aluminum.
9. The cover assembly of claim 1 wherein said concave exterior surface comprises a portion of a substantially circular radius.

10. A temperature control system for adjusting or maintaining the temperature of a fluid comprising:

a conduit for passing a fluid;

at least one elongate fluid transfer profile positioned in thermal contact with an exterior of said conduit and extending longitudinally there along;

a cover fastened about said conduit and said profile, said cover maintaining said at least one profile in thermal contact with said conduit.

11. The temperature control system of claim 10 wherein:

said conduit is substantially cylindrical; and

said at least one profile comprises a surface having an arcuate cross section positioned adjacent an exterior of said conduit.

12. The temperature control system of claim 11 wherein said at least one profile comprises a plurality of profiles arranged substantially radially symmetrically about said conduit.

13. The temperature control system of claim 12 wherein said cover comprises at least one flexible panel securable about said conduit and having a plurality of retention means for retaining said profiles in a desired position relative to one another.

14. The temperature control system of claim 13 wherein said cover comprises

a substantially rectangular panel with means for attaching to itself along opposite longitudinal edges; and

wherein said retention means retain said profiles substantially parallel said longitudinal edges.

15. The temperature control system of claim 14 wherein said cover comprises: a plurality of plastic hooks along a first of said longitudinal edges; and

a plurality of plastic loops adapted to detachably secure to said hooks along a second of said longitudinal edges.

16. The temperature control system of claim 11 further comprising fittings
5 at opposite ends of said at least one profile adapted for fluidly connecting said profile with a supply of thermal transfer fluid.

17. The temperature control system of claim 16 wherein at least one of
10 said fittings comprises a threaded aperture oriented substantially orthogonal to a longitudinal orientation of said profile.

18. The temperature control system of claim 10 further comprising a
15 spreadable thermally conductive material disposed between said conduit and said at least one fluid transfer profile.

19. A cover assembly for a fluid transfer conduit comprising:
a flexible fabric cover, said cover being openable to a first substantially
planar conformation, and closeable to a second substantially cylindrical conformation,
said cover comprising means for attaching to itself in said second conformation; and
20 a plurality of elongate hollow profiles mounted in said cover, each of
said profiles comprising a concave wall surface.

20. The cover assembly of claim 19 wherein each of said profiles is
substantially rectangular in cross section, each said profile comprising three
25 substantially planar wall surfaces and an arcuate wall surface.

21. The cover assembly of claim 19 wherein in said first conformation said
end portions arc substantially uniformly out of a plane defined by said cover, and
wherein in said second conformation said end portions arc substantially uniformly
30 away from an axis of a cylinder defined by said cover.

22. The cover assembly of claim 19 further comprising first and second
fabric strips sewn to an inside of said cover at a plurality of locations, each of said
strips defining a plurality of loops for receipt of a profile.

23. The cover assembly of claim 19 wherein said cover comprises a thermally insulating material.

5 24. A method of regulating the temperature of the contents of a fluid carrying conduit comprising the steps of:

positioning a concave exterior surface of at least one thermally conductive hollow profile in thermal contact with and substantially conforming to the exterior of said fluid carrying conduit;

10 passing a thermally conductive fluid through said profile, thereby facilitating transfer of heat between the contents of the fluid carrying conduit and the thermally conductive fluid.

25. The method of claim 24 further comprising the step of securing a
15 flexible cover about said profile and the conduit to position and maintain the same in thermal contact.

26. The method of claim 24 wherein the step of positioning the exterior surface of at least one profile in thermal contact with the conduit comprises
20 positioning a plurality of thermally conductive hollow profiles radially about an exterior of a fluid carrying conduit.